

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to Fig. 2B. The numeral “280” has been added to Fig. 2B.

Attachment: Annotated Sheet
 Replacement sheet

REMARKS

The amendment of claim 1 is supported by original claim 6 and the Abstract. New claim 41 is supported by paragraph [0041] of the specification. New claim 42 is supported by paragraph [0035] of the specification. Applicants respectfully submit that the limitations “impedance spectroscopy” of claim 41 and “wherein the array addressed device comprises integrating impedance measurement circuitry into the array addressed device and memory array to perform an electrical readout” in claim 42 are not disclosed in the cited references *as a whole*.

Drawings

The objection to the Drawings should be withdrawn in light of the attached revised Fig. 2B.

Claim Rejections - 35 USC 112

Claims 1-4 and 6-21 were rejected under 35 USC 112, second paragraph. This rejection is respectfully traversed.

The indefiniteness rejection of claims 1, 14, and 17 should be withdrawn in light of this Amendment.

The indefiniteness rejection of claims 20 and 21 are respectfully being traversed as the term “selective membrane” refers to a membrane that has selectivity, i.e., preference, for a particular material, for example, a “chemically selective membrane” has a selectivity for a chemical, and a “biological selective membrane” has a selectivity for a biological species. The term “selective membrane” is so well known in the art that even in 1998, which is prior to the filing date of the present application, there was a program at National Institute of Standards and Technology (NIST) called “Competition (98-07) Selective-Membrane Platforms: Putting Membranes to Work for the Specialty Chemicals Industry. See <http://www.atp.nist.gov/atp/98-smp.htm>.

Claim Rejections - 35 USC §102

Claims 1, 8-18, 14-17 and 19-21 were rejected as being anticipated by Li.

Claim 1 now included the limitation of claim 6.

Claim 14 has been recited as an independent claim. In rejecting claim 14, the Examiner states that page 24, paragraph 4, of Li discloses “further comprising control circuitry coupled to the sensor elements, wherein the control circuitry is configured to detect interactions of the sensor elements with the target molecules.” Applicants respectfully submit that page 24, paragraph 4, of Li fails to disclose “further comprising control circuitry coupled to the sensor elements, wherein the control circuitry is configured to detect interactions of the sensor elements with the target molecules.” If the Examiner still thinks that page 24, paragraph 4, of Li discloses “further comprising control circuitry coupled to the sensor elements, wherein the control circuitry is configured to detect interactions of the sensor elements with the target molecules,” then the Examiner is kindly requested to point out the sentences in paragraph 4 on page 24 of Li that disclose this limitation.

Claim Rejections - 35 USC §103

Claims 2-4 were rejected as being obvious over Li in view of Chazalviel. This rejection is moot in light of this Amendment as claim 1 now contains the limitation of claim 6.

Claims 6 and 7 were rejected as being obvious over Li in view of Chazalviel, further in view of Yoshida. This rejection is respectfully traversed.

The limitation “a waveguide total internal reflection prism” of claim 6 is now in claim 1. The Examiner states on 12, lines 11-15, that “it would have been obvious to further include a total

reflection prism (waveguide), which is optionally coupled to the FR-IR spectroscope as taught by Yoshida et al. in the apparatus of Li in view of Chazalviel et al. as it is *generally known* to use total internal reflection prisms in order to provide infrared rays to FT-IR spectroscope.” [Emphasis added.]

Applicants respectfully submit that the issue is not whether “it is *generally known* to use total internal reflection prisms in order to provide infrared rays to FT-IR spectroscope.” The issue is whether there would have been a motivation to combine the cited references to use total internal reflection prisms (waveguide) in an apparatus comprising an array addressed device, wherein the array addressed device is configured to detect bonding and/or lack-of-bonding of a target molecule to the array addressed device. Applicants respectfully submit there is no teaching, suggestion or motivation to combine the cited prior art to arrive at an apparatus comprising an array addressed device, wherein the array addressed device is configured to detect bonding and/or lack-of-bonding of a target molecule to the array addressed device as claimed in claim 1. In addition, Applicants submit that the Examiner is kindly requested to provide explicit facts that support a statement such as “generally known.” This requirement still exists under the flexible “teaching-suggestion-motivation” standard articulated by the Supreme Court in *KSR Int’l Co. v. Teleflex Inc.* 550 U.S. ____ (2007). “To facilitate review, [the obviousness] analysis should be made explicit.” *Id.*

Claim 13 was rejected as obvious over Li in view of Dai. This rejection is respectfully traversed and should be withdrawn as claim 13 depends indirectly from claim 1, which should now be allowable.

Claim 18 was rejected as obvious over Li in view of Ito. This rejection is respectfully traversed and should be withdrawn as claim 18 depends indirectly from claim 14, which should now be allowable.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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Attachment

